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Case No. CE10711R

### REMARKS

Reconsideration of the above-referenced application is respectfully requested in view of these remarks. Claims 1-20 are currently pending.

In the Final Office Action, claims 8-11 and 15-18 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant notes with appreciation that the subject matter of these claims is deemed to be allowable if rewritten to include all limitations of the superseding and rejected claims. Applicant wishes to reserve the right to rewrite these claims, should further discussions regarding the base and superseding claims prove unrewarding.

In the Final Office Action, claims 1, 5, 6, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Application Publication No. 2002/0009066 to Shimizu et al. in view of United States Patent Application Publication No. 2002/0018476 to Roy. Applicant respectfully traverses this rejection. Focusing on the independent claims, the present invention is directed to the establishment of a special communications channel between a home agent and a foreign agent within a wireless communication system. This special communication channel is separate from the unicast tunnels that are also established between the home agent and the foreign agent within the wireless communication system. The special communication channel is dedicated to communicating messages carried by the system that are addressed to multiple mobile nodes within the system. The unicast tunnels are used for other messages carried by the system.

As seen in independent claims, the present invention detects whether a message that is received by the home agent is a message that is addressed to multiple mobile nodes. Such messages include, but are not limited to, Broadcast messages and Multicast messages. Broadcast and Multicast messages can be detected by any given method including examination of their addresses. When a Broadcast or Multicast message is detected, the message is sent to the foreign agent through the special communications channel, which is separate from the unicast tunnels that are used for other types of messages. In at least one embodiment of the present invention, special communications

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channels can be established for the Broadcast messages and the Multicast messages. By the establishment of the special communications channel through the foreign agent and separate from the unicast tunnels, the performance of the wireless communication system can be optimized.

The Office Action states that Shimizu disclose establishing a communications channel, detecting whether a message is addressed to multiple mobile nodes and then sending messages to the multiple nodes through the special communications channel. In paragraphs [0073-0074], Shimizu describes the creation of the communications path within an IP network that includes a home agent and a foreign agent. It appears from the citations, e.g. paragraphs [0022-0024], that the Office Action is characterizing the combining of a plurality of Binding Request Messages for obtaining the care-of address of a plurality of mobile terminals into an extended Binding Request Message, when the plurality of mobile terminals are coupled to the same home agent as using a special communications channel to send messages that are addressed to multiple mobile nodes. Shimizu is directed to a route optimization method and an agent apparatus by which an IP packet route is optimized to a communication system employing a mobile IP protocol. In particular, Shimizu is directed to combining the plurality of Binding Request Messages to obtain the care-of address of a plurality of mobile terminals into the Extended Binding Messages as optimizing the communication system.

Shimizu's Binding Request Messages to obtain the care-off address of a plurality of mobile terminals into the Extended Binding Messages does not disclose the present invention. More particularly, Shimizu discloses the bundling Binding Request Messages when there are similar messages or Broadcast and Multicast messages being sent to a plurality of mobile terminals located under the foreign agent. Shimizu does not disclose the present invention that establishes a special communications channel through the foreign agent where the special communications channel is separate from any other communication channel such as the unicast tunnels. As seen in the Shimizu figures there are no different channels between the home agent and the foreign agent that are used for messages that are being sent to multiple nodes. In total, Shimizu is not relevant to the present invention

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The Final Office Action states that Roy, at paragraph [0008], teaches that the special communication channel is separate from the unicast channels. Roy's Paragraph [0008] is a very high level overview of H.320 and H.323 standards and the development of these standards. To the extent that Roy discusses channels, it states "the ITU published a set of standards for multimedia communication over packet-based networks (PBNs) under the H.323 designation, which includes standards for data channels, monitoring channels, and control channels." As for unicast and multicast messages, paragraph [0008] only states, "The H3.23 standard defines how audio and video conferencing systems communicate over packet-switched networks defines [sic] call control and management practices for point-to-point and broadcast/multicast/unicast multipoint conferences, addresses [Quality of Service] issues with a centralized gatekeeping that LAN administrators use to manage media traffic, bandwidth and user participation, and describes functionality that allows calls to connect from the LAN to the Public Switched Telephone Network (PST) as well as other H.32x standards-based terminals." Neither of these quotes specifically mentions a special channel for dedicated messages and a unicast tunnel. To the extent that Roy discloses that there may be different channels, Roy does not disclose where these channels and tunnels are located, i.e. between home agents and foreign agents, and how the channels and tunnels handle different types of messages, which is required by the present invention. Thus, Roy does not teach or otherwise suggest the special channel being separate from the unicast tunnels, which is also not disclosed by Shimizu.

In view of the foregoing, it is respectfully submitted that the combination of Shimizu and Roy does not disclose, teach or otherwise suggest independent claims 1, 12 and 19 and that the claims are not obvious. As claims 5 and 6 depend upon amended claim 1 and include all the limitations of that independent claim, it is respectfully submitted that claims 5 and 6 are also not obvious in view of Shimizu and Roy. Applicants therefore respectfully request that the rejection under Section 103(a) be withdrawn as to claims 1, 5, 6, 12 and 19.

In the Office Action, claims 2-4, 7, 13, 14 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu and Roy in view of United States Patent No. 6,781,999 to Eyuboglu. Applicant respectfully traverses this rejection for the reasons

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given above and for the reasons given here. With respect to claims 2 and 20, the Office Action cites Eyuboglu for the premise that the messages that are addressed to multiple mobile nodes can be Broadcast messages or Multicast messages. With respect to claims 3 and 13, the Office Action cites Eyuboglu as establishing of channels for the Broadcast and Multicast messages and where the Broadcast and Multicast messages are sent over the channels. With respect to claims 4 and 14, the Office Action cites Eyuboglu as establishing a single channel for sending both Broadcast and Multicast channels and sending the Broadcast and Multicast messages to the foreign agent over the channel. With respect 7, the Office Action cites Eyuboglu for opening a Generic Routing Encapsulation between the foreign agent and the home agent for receiving the messages addressed to multiple nodes.

Assuming *arguendo* that Eyuboglu does disclose the matter as stated in the Office Action, the combination of Shimizu, Roy and Eyuboglu does not disclose the establishment of the special communications channel to the foreign agent where the special communications channel is separate from the unicast channels and where the special communications channel is used for messages addressed to a plurality of mobile nodes. It is therefore respectfully submitted that claims 2-4, 7, 13, 14 and 20 are not obvious and are therefore patentable over Shimizu and Roy in view of Eyuboglu. Applicants respectfully request that the rejection under Section 103(a) be withdrawn.

As the applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

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Please charge any fees associated herewith, including extension of time fees, to  
50-2117.

Respectfully submitted,  
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